WHAT IS CLAIMED IS:

1. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and an attenuated, tumor-targeting Gram-negative bacterium containing a bacteriophage, wherein the genome of the bacteriophage has been modified to encode for a gene product of interest under the control of an eukaryotic promoter or wherein the genome of the bacteriophage has been modified to encode the gene of interest as a fusion protein with a bacteriophage capsid protein.

2. The composition according to claim 1 in which the bacterium is a *Salmonella*.

3. The composition according to claim1 in which the Gram-negative bacterium is *Shigella*.

4. The composition according to claim 1 in which the gene product of interest is a proteinaceous molecule.

5. The composition according to claim 1 in which the gene product of interest is an antigen.

6. The composition according to claim 4 in which the molecule is selected from the group consisting a cytokine, a cytotoxin, a pro-drug converting enzyme and an anti-angiogenic agent.

7. The composition according to claim 6 in which the cytotoxin is a bacteriocin.

8. A kit comprising an attenuated, tumor-targeting Gram-negative bacterium containing a bacteriophage, wherein the genome of the bacteriophage has been modified to encode for a gene product of interest under the control of an eukaryotic promoter or wherein the genome of the bacteriophage has been modified to encode the gene of interest as a fusion protein with a bacteriophage capsid protein, together with instructions for administering the attenuated, tumor-targeting Gram-negative bacterium containing a bacteriophage to a subject to deliver the gene product of interest.

9. A kit comprising an attenuated, tumor-targeting Gram-negative bacterium expressing the F' pilus and a filamentous bacteriophage, wherein the genome of the bacteriophage has been modified to encode for a gene product of interest under the control of an eukaryotic promoter or wherein the genome of the bacteriophage has been modified to encode the gene of interest as a fusion protein with a bacteriophage capsid protein, together with instructions for administering the attenuated, tumor-targeting Gram-negative bacterium expressing the F' pilus and a filamentous bacteriophage to a subject to deliver the gene product of interest.

10. The kit according to claim 8 or 9 in which the Gram-negative bacterium is *Salmonella* or *Shigella*.

11. A method for delivering an agent comprising administering, to a subject, a pharmaceutical composition comprising an attenuated Gram-negative bacterium containing a bacteriophage, wherein the bacteriophage genome has been modified to encode for a gene product of interest under the control of an eukaryotic promoter or wherein the genome of the bacteriophage has been modified to encode for a gene of interest as a fusion protein with a bacteriophage capsid protein.

12. The method according to claim 11, in which the gene of interest is an antigen or a pro-drug converting enzyme.

13. The method according to claim 11, in which the gene of interest is fused with a bacteriophage capsid protein.

14. A method for delivering an agent comprising administering, to a subject, a pharmaceutical composition comprising an attenuated Gram-negative bacterium expressing the F' pilus and a filamentous bacteriophage, wherein the bacteriophage genome has been modified to encode for a gene product of interest under the control of an eukaryotic promoter or wherein the genome of the bacteriophage has been modified to encode for a gene of interest as a fusion protein with a bacteriophage capsid protein.

15. A method of inhibiting tumor growth or reducing tumor volume comprising administering, to a subject in need of such inhibition or reduction, a pharmaceutical composition comprising an attenuated, tumor-targeting Gram-negative bacterium containing

a bacteriophage, wherein the bacteriophage genome has been modified to encode for a gene product of interest under the control of an eukaryotic promoter or wherein the genome of the bacteriophage has been modified to encode the gene of interest as a fusion protein with a bacteriophage capsid protein.

16. The method according to claim 15 in which the Gram-negative bacterium is *Salmonella* or *Shigella*.

17. A method of inhibiting tumor growth or reducing tumor volume comprising administering, to a subject in need of such inhibition or reduction, a pharmaceutical composition comprising an attenuated, tumor-targeting Gram-negative bacterium expressing the F' pilus and a bacteriophage, wherein the bacteriophage genome has been modified to encode for a gene product of interest under the control of an eukaryotic promoter or wherein the genome of the bacteriophage has been modified to encode the gene of interest as a fusion protein with a bacteriophage capsid protein.

18. The method according to claim 17 in which the Gram-negative bacterium is *Salmonella* or *Shigella*.

19. The method according to claim 15 or 17 in which the solid tumors is selected from the group consisting of breast cancer, prostate cancer, cervical cancer, uterine cancer, lung cancer, ovarian cancer, testicular cancer, thyroid cancer, astrocytoma, glioma, mesothelioma, renal cancer, bladder cancer, pancreatic cancer, stomach cancer, liver cancer, colon cancer, and melanoma.

20. The method according to claim 11 or15 in which the bacteriophage is a phagemid.

21. The method according to claim 11 or 15 in which the gene product of interest is a proteinaceous molecule.

22. The method according to claim 21 in which the molecule is selected from the group consisting a cytokine, a cytotoxin, a pro-drug converting enzyme and an anti-angiogenic agent.

23. The method according to claim 21 in which the gene product of interest is a proteinaceous molecule fused to a ferry peptide sequence.

24. An attenuated , tumor targeting *Salmonella* expressing the F' pilus.